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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Karlheinz Horsting

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EXAMINER

DANIELS, MATTHEW J

ART UNIT

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1791

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/507,403	<b>Applicant(s)</b> HORSTING ET AL.	
	<b>Examiner</b> MATTHEW J. DANIELS	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 29-59 is/are pending in the application.
- 4a) Of the above claim(s) 41-51 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 29-40 and 52-59 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 November 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/13/04</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Claims 29-40 and 52-59 in the reply filed on 23 June 2008 is acknowledged. The traversal is on the ground(s) that Broadway covers the fiber arrangement with a melt blown web, and does not impregnate with a resin. This is not found persuasive because the Broadway reference suggests that the adhesive need not be fiberized, but can be formed by a doctor blade (12:37, not fiberized) and can also penetrate into the fiber network (10:5-6). Further, Broadway teaches that significant impregnation of adhesive into the network is known (10:1-4), thus suggesting that the special technical feature is known and conventional in the art, and therefore does not make a contribution over the prior art.
2. With respect to the DE 10005202 reference, Applicants point to elements present in the reference which are absent from the claimed invention, but do not point to any element of the special technical feature absent from the reference or from the analysis of the special technical feature set forth in the previous action.
3. With respect to the burden, the classification is merely one method of demonstrating burden. Applicants have not particularly argued that any of the cited sources of burden is absent in this case. As Applicants have also pointed out, "unity of invention" criteria must be applied, but have not cited to any authority for the conclusion that a showing of burden is required to fulfill the "unity of invention" criteria.
4. The requirement is still deemed proper and is therefore made FINAL.

***Drawings***

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “extrusion” operation of Claim 52 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

6. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

7. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: at least items 56 and 59-65. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR

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1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Information Disclosure Statement***

8. The information disclosure statement filed 13 September 2004 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but certain references have not been considered.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. **Claims 52-59** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 52 and 53 recite that the blanks are placed in a press until the requisite wall thickness is achieved, and then extrusion is carried out in a known manner. While

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Applicant may be their own lexicographer, the use of "extrusion" in this context contradicts the use of a press, making this claim indefinite because it cannot be determined whether Applicants actually seek a pressing process (as depicted in Fig. 3) or an extrusion process (as claimed). A press, as shown in Fig. 3, items 62-65 produces an article by pressing. The claims recite that the resin-impregnated mat is placed into a press, suggesting that Fig. 3 demonstrates the claimed embodiment. However, ordinary definitions of the claimed extrusion would require shaping of material by forcing through a die, and not merely forming between two dies or molds. Since the two claim constructions are contradictory, one must be selected for examination. The use of a press (Claims 52 and 53) is corroborated by Fig. 3, and so the "extrusion" operation is believed to be a pressing process.

10. **Claim 32** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. With respect to **Claim 32**, the claim does not actually recite any direction for alignment, and therefore it is unclear how to interpret the claim.

11. **Claims 52-59** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. There is no antecedent basis for the backing and covering film. Claims 54-59 are rejected by dependence. Also note that Claim 56 appears to incorrectly depend on Claim 42.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. **Claims 29-37, 39, and 40** are rejected under 35 U.S.C. 103(a) as being unpatentable over Trudeau (US 5,209,804) in view of Nishimura (US 4,622,254). **As to Claim 29**, Trudeau teaches a cutting process in which a prepreg material is drawn off in one piece from a roll (Fig. 1, item 28) and cut to size according to a given contour (Fig. 1, items 23 and 25). It is submitted that the fiber orientation in the pieces cut by Trudeau would obviously be matched to the loading forces to be placed on the component.

Trudeau is silent to the particular prepreg claimed in Claim 29. However, Nishimura teaches a non-woven fabric reinforcement of a resin-impregnated mat from at least one layer of intersecting endless fibers which would obviously resemble a textile when its various layers are overlapped as depicted in Fig. 7.

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Nishimura into that of Trudeau because (a) Trudeau suggests prepreg materials and Nishimura provides a prepreg which one would have recognized as being of the type suggested by Trudeau, or (b) the combination merely provides a known material (Nishimura) in a known process (Trudeau) in which the material would have been desirable.

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**As to Claims 30-37, 39, and 40**, Nishimura teaches a non-woven material built from layers having different alignment Fig. 7, items 1a-3), wherein at least one layer is unidirectionally aligned (Fig. 7, item 3), wherein the multitude of non-woven materials would obviously provide alignment in the effective direction of any force or wherein one would have found it obvious to reinforce in the stress direction (Fig. 7), wherein the mat is impregnated with resin (7:40-46) thereby joining the fibers to one another at their intersections, wherein an angle of intersection between the fiber includes 45 degrees which is interpreted to be a conventional textile configuration (3:25-31, 2:35-45), wherein the mat is built from several layers of non-woven material and wherein each interface exhibits a textile structure (Fig. 7, items 3/5 and 6/4), wherein the individual angles can be different (so long as they fulfill the 25-65 degree condition at 2:35-45), wherein the fibers are carbon (6:20-28), and wherein the fibers would obviously be prepared for flow (prepregs would obviously be prepared for pressing since the resin is not fully cured, 4:26).

13. **Claim 38** is rejected under 35 U.S.C. 103(a) as being unpatentable over Trudeau (US 5,209,804) in view of Nishimura (US 4,622,254), and further in view of Woelfel (US 4,294,639). Trudeau and Nishimura teach the subject matter of Claim 29 above under 35 USC 103(a). **As to Claim 38**, Trudeau and Nishimura appear to be silent to the claimed random fibers. However, prepregs having unidirectional fibers and chopped fibers in combination are conventional. See Woelfel, Figs. 1 and 16-18. It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Woelfel into the modified process of Trudeau because (a) Trudeau suggests prepregs without limitation to any particular



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configuration, and Woelfel provides a prepreg, or (b) the combination merely provides a known prepreg configuration into a known process which utilizes preregs, or (c) one would have been motivated to substitute the particular chopped fibers into the modified method of Trudeau in order to provide a material having more isotropic properties (strength in all directions).

14. **Claims 52-59** are rejected under 35 U.S.C. 103(a) as being unpatentable over Trudeau (US 5,209,804) in view of Nishimura (US 4,622,254), and further in view of Livingston (US 3,881,978). **As to Claims 52 and 53**, Nishimura suggests heating under pressure (1:20-21) and the particular non-woven reinforcement configuration claimed (see the rejection of Claim 29), and Trudeau teaches a resin-impregnated mat produced by drawing off from a roll as a web and cutting a blank having a crude contour (see the rejection of Claim 29), but the references appear to be silent to the blanks being placed into a press to reach a wall thickness, peeling off the backing and covering film, and pressing in a known manner. It is submitted, however, that Livingston teaches providing a backing sheet and a covering sheet (items 4 and 8), which are removed before pressing (Example 1), and that these aspects are conventional for use with preregs. Multiple layers are stacked and pressed between plates in a known manner (5:48-60). Note that these teachings are somewhat redundant over those already found in the Trudeau reference (column 1). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Livingston into that of the modified Trudeau process because Trudeau suggests a laminate pressing process (which Livingston provides), and one would have incorporated the improvement of Livingston (the backing and

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covering sheets) into the Trudeau process in order to avoid spreading resin over the cutting and handling apparatus.

Regarding Claims 54-59, Trudeau teaches substantially the claimed cutting device operated in the substantially the same manner. **As to Claims 54 and 55**, Trudeau teaches a numerically controlled cutter which would operate automatically by computer control (150). **As to Claims 56 and 57**, Trudeau teaches a pickup device (column 4, especially 4:29-59), and one would have found it obvious to use the Trudeau device to place directly into the mold cavity also suggested by Trudeau (1:54-65). **As to Claims 58 and 59**, it is submitted that because all of the operations of Trudeau are numerically controlled (column 4), that there would obviously be a computer code stored in the computer to control all of the claimed operations. In the alternative, it would have been obvious to provide a code which controls all of the claimed operations.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW J. DANIELS whose telephone number is (571)272-2450. The examiner can normally be reached on Monday - Friday, 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew J. Daniels/

Primary Examiner, Art Unit 1791

9/2/08